LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

PART VI –C (ARCHIVES)

WATERBODY MANAGEMENT PLAN SERIES

SPANISH LAKE

AQUATIC VEGETATION TYPE MAPS
AND NARRATIVES

September 3, 1982

MEMORANDUM:

TO: Louie Richardson, Research Supervisor

FROM: Malcolm Leatherman, Biologist

SUBJECT: Spanish Lake

The general condition of Spanish Lake was one of a relatively stable water level and high turbidity as usual. A few water hyacinth plants were present along with some marginal alligatorweed.

Hydrilla was the primary submergent plant present. As in the past this plant was confined to the boat launch area and along the sides of the access canal going to the open lake. Growth was fairly extensive as compared with previous observations. Apparently the high turbidity of Spanish Lake is a factor contributing to the very slow spreading of hydrilla.

Approximately 20% of the hydrilla was treated around the boat ramp with Aquathol herbicide and bags of unlabeled pellets of herbicide acquired from the Rosedale warehouse.

NO MAP

October 31, 1984

MEMO

TO: Louie Richardson, Research Supervisor

FROM: Malcolm Leatherman, Regional Biologist

SUBJECT: Spanish Lake

On October 26, 1984 I made a field trip to Spanish Lake in Iberia parish to get a general overview of aquatic weed problems. At the time of this visit, the lake had been drained. Some water was standing in sump areas and in canal bordering the levee. The majority of lake bottom had an extensive growth of terrestrial vegetation. Approximately 90% of the hydrilla infested bottom along the main channel leading from the boat ramp had been dewatered.

NO MAP

SPANISH LAKE

September, 1985

Charles Dugas

As of September 5, 1985, Spanish Lake (Iberia and St. Martin Parishes) was still dewatered. The canal adjacent to the levee was choked with duck potato (*Sagittaria latifolia*). The rest of the water in the lake was very shallow and contained no vegetation that was observable from the road.

NO MAP

Spanish Lake

September, 1986

Charles N. Dugas

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on September 5, 1986.

This lake was flooded in the fall of 1985 after having been drawn down since May of 1984.

There was a heavy plankton bloom in the lake. The visibility was 12 inches or less. No submersed or floating vegetation was observed anywhere in the lake. The only plants found were willows (*Salix nigra*) which had grown during the drawdown. Most of these in water 4-5 feet deep where dead or dying. The trees in water 3 feet deep or less appeared not to be dying. There were larger, healthy trees which were present before the drawdown. Waters 5 feet or deeper had no vegetation.

SPANISH LAKE

September, 1987

Charles N. Dugas

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on September 25, 1987.

This lake was flooded in the fall of 1985 after having been drawn down since May of 1984.

There was a heavy plankton bloom in the lake. The visibility was 18 inches or less. No submersed or floating vegetation was observed anywhere in the lake. The only plants found were willows (*Salix nigra*) which had grown during the drawdown. Most of these in water 4-5 feet deep were dead or dying. The trees in water 3 feet deep or less appeared not to be dying. There were larger, healthy trees which were present before the drawdown. Waters 5 feet or deeper had no vegetation.

Spanish Lake

September, 1988

Charles N. Dugas

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on September 29, 1988.

There was a heavy plankton bloom in the lake. The visibility was 10 inches. No submersed or floating vegetation was observed anywhere in the lake. Willow trees, *Salix nigra*, which had grown while the lake was drawn down in 1984-85, were less abundant than the previous year. The trees that were present appeared to be sickly and dying.

SPANISH LAKE
October 1990
Charles N. Dugas

Spanish Lake, Iberia and St. Martin Parishes, was drained during the summer of 1990 for the purpose of lake renovation. Therefore, at this time there is no water in the lake. During this dewatered period black willows, *Salix nigra*, infested the lake bottom. The willow infestation was treated with an aerial application of 2,4-D on October 9, 15 and 16.

NO MAP

SPANISH LAKE
October 1991
Charles N. Dugas

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on October 2, 1991.

The lake had been drawn down for lake renovation during the summer of 1990. In April of 1991 the lake was partially refilled (about two feet below pool stage). The lake will undergo another draw-down in the coming year to continue lake renovation.

During the draw-down the lake had been infested with black willow, *Salix nigra*. The willow infestation was treated with an aerial application of 2,4-D on October 9, 15 and 16 of 1990. At this time there has been little re-growth of the treated willow. There are, however, patches of willow that were unintentionally skipped during the application. These patches of willows may act as breakwaters and lessen the severity of wave action on the levee; therefore, they will probably remain untreated.

Other vegetation encountered during the survey was arrowhead, *Sagittaria latifolia* and water hyacinth, *Eichhornia crassipes*. The arrowhead was found primarily in the canal along the southern end of the lake, while the water hyacinth was found along the western shoreline.

The weather on the day of the survey was clear and warm (80 degrees F). The water was moderately turbid (Secchi – 18 inches) and the water temperature was 78 degrees F. As noted earlier the lake was approximately two feet below pool stage.

SPANISH LAKE
October 1993
Charles N. Dugas

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on October 14, 1993.

Hydrilla, Hydrilla verticillata, was observed in the canal near the boat ramp. The infestation was light to moderate and only in shallow water at the shoreline. This plant was not observed anywhere else in the lake.

There are still dense stands of stunted and dead or dying willows, Salix nigra, throughout the lake. American lotus, Nelumbo lutea, was observed in two areas: in the southeastern corner of the lake and near the western shore at mid-lake. Water hyacinth was noted in very small amounts in various parts of the lake.

The weather on the day of the survey was overcast and warm (near 80 degrees F). The water had a notable plankton bloom (Secchi-15 inches).

SPANISH LAKE
October 1994
Charles N. Dugas

Spanish Lake, St. Martin and Iberia Parishes, was surveyed for the presence of aquatic vegetation on October 13, 1994.

The only submersed vegetation observed was trace amounts of hydrilla, Hydrilla verticillata, near the boat ramp and along the lake access canal. American lotus, Nelumbo lutea, a floating leaf immersed plant, was present in moderate amounts in several large patches scattered in the lake. Stunted and dead or dying black willow, Salix nigra, still infest about 75% of the lake.

The weather on the day of the survey was partly cloudy and cool. The water was turbid with a Secchi of 15 inches.

SPANISH LAKE
October 1995
Charles N. Dugas

Spanish Lake, St. Martin and Iberia Parishes, was drawn down for lake bottom and levee renovation in the spring of 1995. It will remain de-watered until completion of the work, probably January or February of 1996.

NO MAP

SPANISH LAKE
August 1996
Charles N. Dugas

Spanish Lake, St. Martin and Iberia Parishes, was drawn down for lake bottom and levee renovation in the spring of 1995. The work has been completed, but the lake has been only partially refilled because of pump problems. During the de-watered period the willow tree infestation increased considerably. An evaluation of this problem will have to wait until the lake is completely filled. Some terrestrial and shallow water aquatic plants appeared during the drawdown, however, it is expected that these will disappear when they are covered with water.

NO MAP

SPANISH LAKE
October 1997
Charles N. Dugas

Spanish Lake, St. Martin and Iberia Parishes, was surveyed for the presence of aquatic vegetation on October 21, 1997.

Before the lake was drawn down in the spring of 1995, hydrilla (Hydrilla verticillata) was found near the boat landing and along the lake access canal. There has not been any other submersed species observed in the lake in over ten (10) years. Since the lake was re-filled in mid-1997 the hydrilla has reappeared in the same area. In addition, coontail (Ceratophyllum demersum) and bladderwort (Utricularia sp.) was found in light scattered clumps throughout most of the lake. During the de-watered period willow trees (Salix nigra) encroached over much of the lake bottom. There were only a few open areas and trails through the willow trees. It is expected that the majority of willows, especially the small ones, will die in the next 4-5 years.

Another species, heretofore, not reported in Spanish Lake was water lettuce (Pistia stratiotes), a floating plant. This plant was found during this survey in moderate to heavy infestations mostly in the willow trees near the shoreline. A moderate infestation of water hyacinth (Eichhornia crassipes) was observed in the northern area of the lake.

The lake was moderately turbid due to a heavy phytoplankton bloom. On the day of the survey the lake level was about six (6) inches below pool.

SPANISH LAKE
October 1998
Charles N. Dugas

Spanish Lake, St. Martin and Iberia Parishes, was surveyed for the presence of aquatic vegetation on October 21, 1998.

The predominant submersed vegetation in the lake was coontail (Ceratophyllum demersum). It was found in a severe fringe in the boat-landing canal, along some of the breakwater levees and in the shallow water along the western shoreline. In the shallow water of the northwestern and northern areas of the lake, coontail was observed in light amounts. Another submersed plant, hydrilla (Hydrilla verticillata) was found in light to moderate amounts mixed with the coontail in the boat-landing canal.

Water lettuce (Pistia stratiotes), a floating plant was present in moderate to severe amounts trapped in the flooded willow trees (Salix nigra). This plant was much more prevalent earlier in the year, but a concerted spray program has diminished the infestation considerably. A few isolated plants of water hyacinth (Eichhornia crassipes) were also observed.

In the deeper, open water areas of the lake the willow tree population seems to be decreasing. This is to be expected considering that willow trees require fluctuating water levels to survive. The larger trees growing in shallow water seem to be surviving. If water levels remain stable for several more years, however, these trees may also begin to die off.

The lake was moderately clear on the day of the survey. The lake level was at pool.

Spanish Lake
September 1999
G. Scott Longman

Spanish Lake, St. Martin and Iberia Parishes, was surveyed for the presence of aquatic vegetation on September 9, 1999. The lake was moderately clear and at pool stage on the day it was surveyed.

During the 1998 survey, coontail *(Ceratophyllum demersum)* and hydrilla *(Hydrilla verticillata)* were found in the lake in various amounts. On a previous inspection, June 7, two sprigs of coontail were found in the canal adjacent to the boat landing. On the day of this survey no submersed vegetation was found within the lake.

Water lettuce *(Pistia stratiotes)* is still present in the lake in light amounts. This plant has never rebounded since it was treated with herbicide early in 1998. A few isolated plants of water hyacinth *(Eichhornia crassipes)* are still present scattered around the lake.

Willow trees *(Salix nigra)* continue to decline with more open water appearing around the interior of the lake. American lotus *(Nelumbo lutea)* was found only in one area adjacent to an interior "crow-foot" levee. Smartweed *(Polygonum spp.)*, Alligator weed *(Alternanthera philoxeroides)*, Water paspalum *(Paspalum repens)* and various other species are beginning to build a thick fringe around the perimeter of the lake.

Spanish Lake
August 2000
G. Scott Longman

Spanish Lake, St. Martin and Iberia Parishes, was surveyed for the presence of aquatic vegetation on August 22, 2000. The lake had a heavy phytoplankton bloom, Secchi measurement of 19 cm, and was approximately two feet below pool stage.

On the day of this survey hydrilla (*Hydrilla verticillata*) was found in small amounts near the boat launch and a few sprigs scattered along the southeastern shore. This year's attempt to establish tape grass (*Vallisneria americana*) apparently failed, no plants were observed in the lake. The cause for the failure was probably due to erratic water levels and phytoplankton blooms caused by the leaking control structure and exacerbated by lack of rainfall. The only other vegetation in the lake are the willow trees (*Salix nigra*) which continue to submerge and give way to open water.

Spanish Lake
October 2001
G. Scott Longman

Spanish Lake, St. Martin and Iberia Parishes, was surveyed for the presence of aquatic vegetation on October 9, 2001. The lake had a light phytoplankton bloom, Secchi measurement of 25 - 28 cm, and was approximately three feet below pool stage.

On the day of this survey one rooted sprig of hydrilla (*Hydrilla verticillata*) was found adjacent to the boat launch. The willow trees (*Salix nigra*), which once infested the lake, have continued to submerge and give way to open water. Introduction of native aquatic vegetation should be considered once the ongoing repairs to the control structure are completed. Rooted aquatic plants could reduce wave energy on interior breakwater levees which are being breached by wave action.

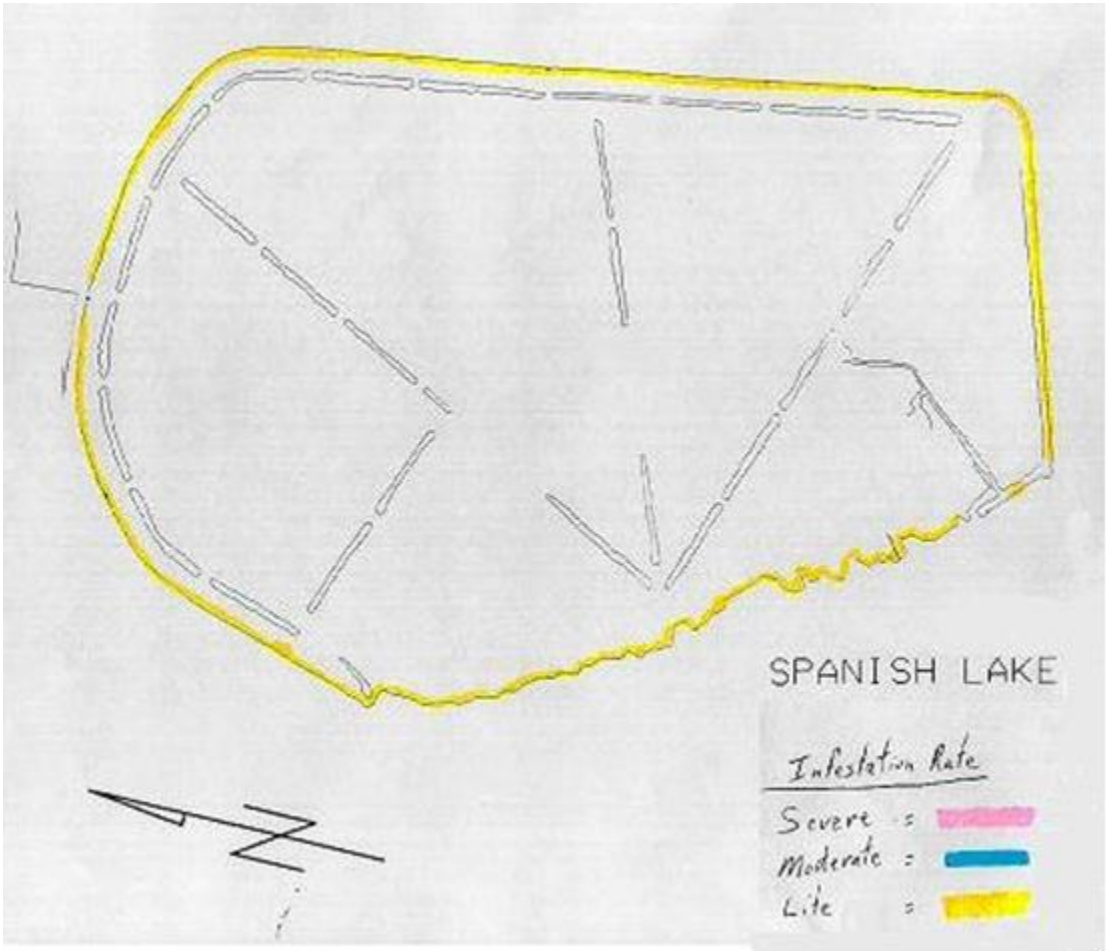
Emersed plant species observed around the lake were *Sagittaria spp*., *Polygonum spp*., and pickerelweed (*Pontederia cordata*).

SPANISH LAKE
July 2003
O. Scott Schales

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on July 9, 2003. The lake had a light to moderate phytoplankton bloom with secchi disk measurements of 28-35 cm. Water levels in the lake were at pool stage.

Overall the lake was free of submersed aquatic vegetation. Approximately ten plants of water hyacinth (*Eichhornia crassipes*) were observed in the boat landing access channel, and a few plants of creeping water primrose (*Ludwigia peploides*) were observed growing out from the lake's impoundment levee.

Emersed plant species that were observed along the shoreline included alligatorweed (*Alternanthera philoxeroides*), water primrose (*Ludwigia spp.*), maidencane (*Panicum hemitomon*), and roseau (*Phragmites australis*); these species were more common along the lake's impoundment levee. And; cattail (*Typha latifolia*), pennywort (*Hydrocotyle spp.*), and needlegrass (*Juncus roemerianus*) were more common along the lake's natural shoreline.

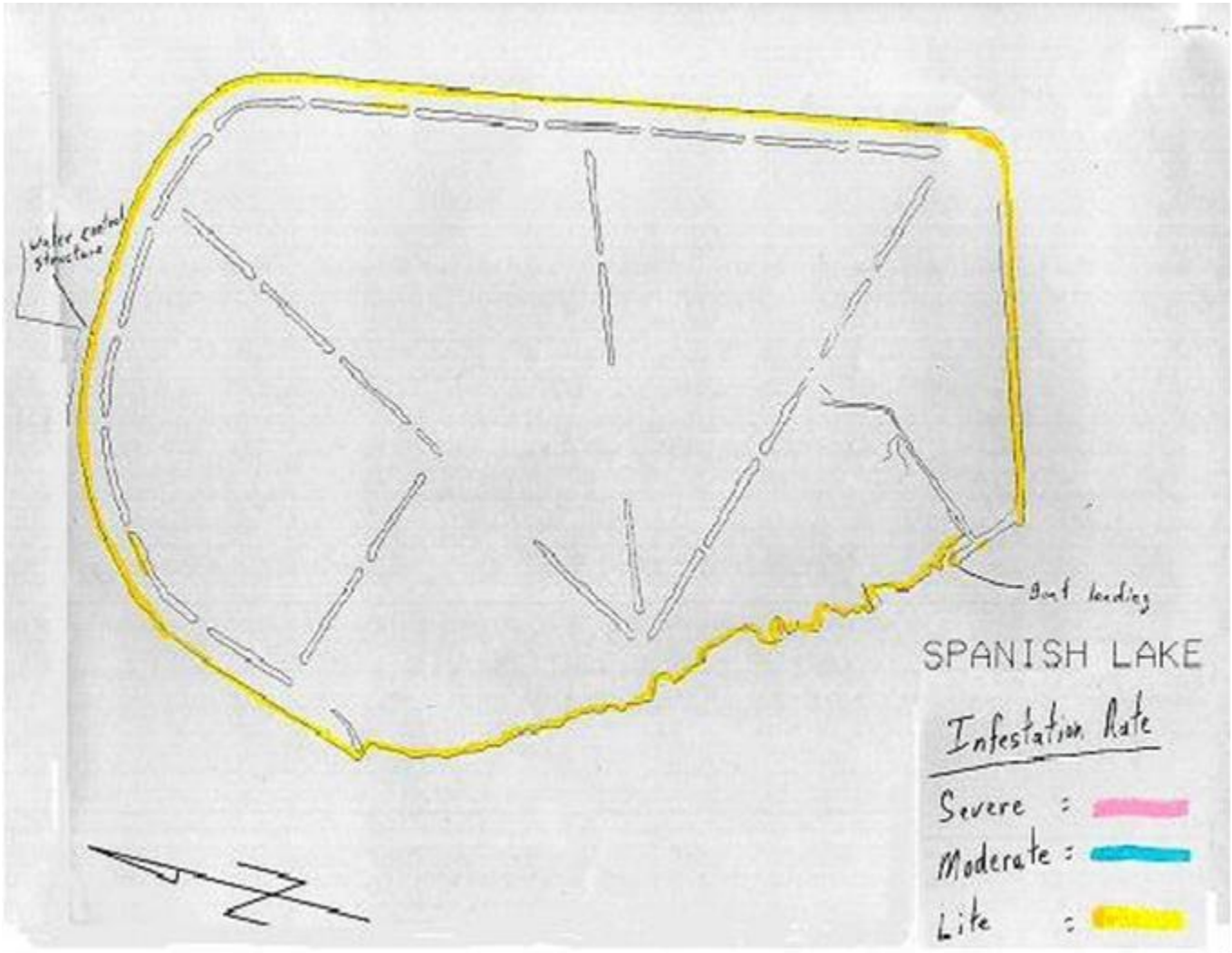


SPANISH LAKE
September 2004
O. Scott Schales

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on September 21, 2004. The lake had a moderate phytoplankton bloom with secchi disk measurements of 15-20 cm. Water levels in the lake were approximately 10" below pool stage.

Overall the lake was free of submerged aquatic vegetation. Light amounts of water hyacinth (*Eichhornia crassipes*) were observed in the boat landing access channel, and light amounts of American lotus (*Nelumbo lutea*) were observed in several locations along the breakwater levees.

Emersed plant species that were observed along the shoreline were maidencane (*Panicum hemitomon*), water primrose (*Ludwigia spp.*), duck potato (*Sagittaria spp.*), and Roseau (*Phragmites australis*). Cattail (*Typha* latifolia) and needlegrass (*Juncus roemerianus*) was also observed primarily along the lake's natural shoreline. Other plant species that were observed during the survey in trace amounts were white water lily (*Nymphaea odorata*), smartweed (*Polygonum hydropiperoides*), and flatsedge (*Cyperus virens*).

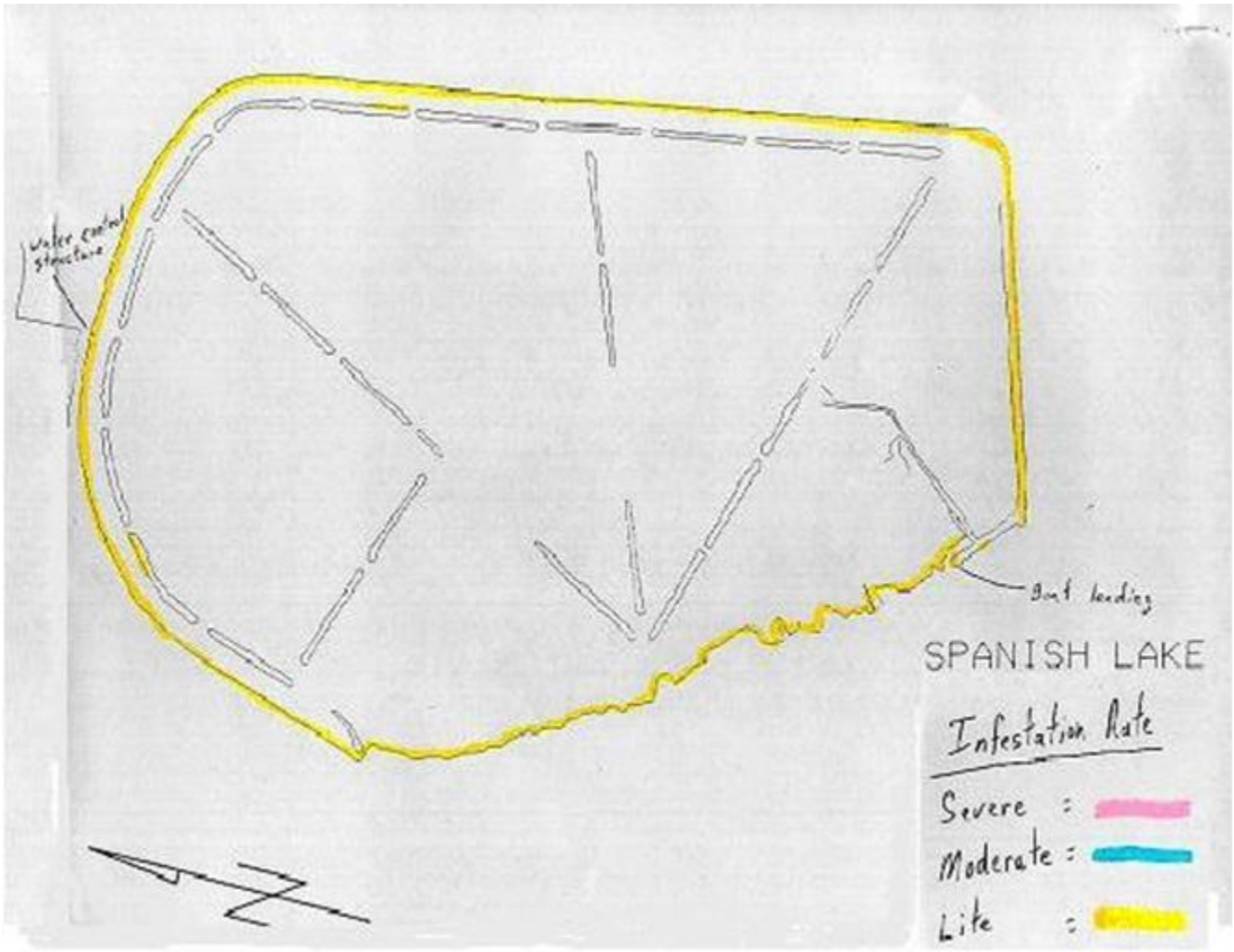


SPANISH LAKE
September 2005
O. Scott Schales

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on September 15, 2005. The lake had a moderate phytoplankton bloom with secchi disk measurements of 20-26 cm. Water levels in the lake were approximately 16" below pool stage.

Overall the lake was free of submerged aquatic vegetation. Light to moderate amounts of American lotus (*Nelumbo lutea*) were observed in several locations along the breakwater levees.

Emersed plant species that were observed along the shoreline were alligatorweed (*Alternanthera philoxeroides*), maidencane (*Panicum hemitomon*), water primrose (*Ludwigia spp.*), duck potato (*Sagittaria spp.*), and Roseau (*Phragmites australis*). Cattail (*Typha latifolia*) and needlegrass (*Juncus roemerianus*) was also observed primarily along the lake's natural shoreline.

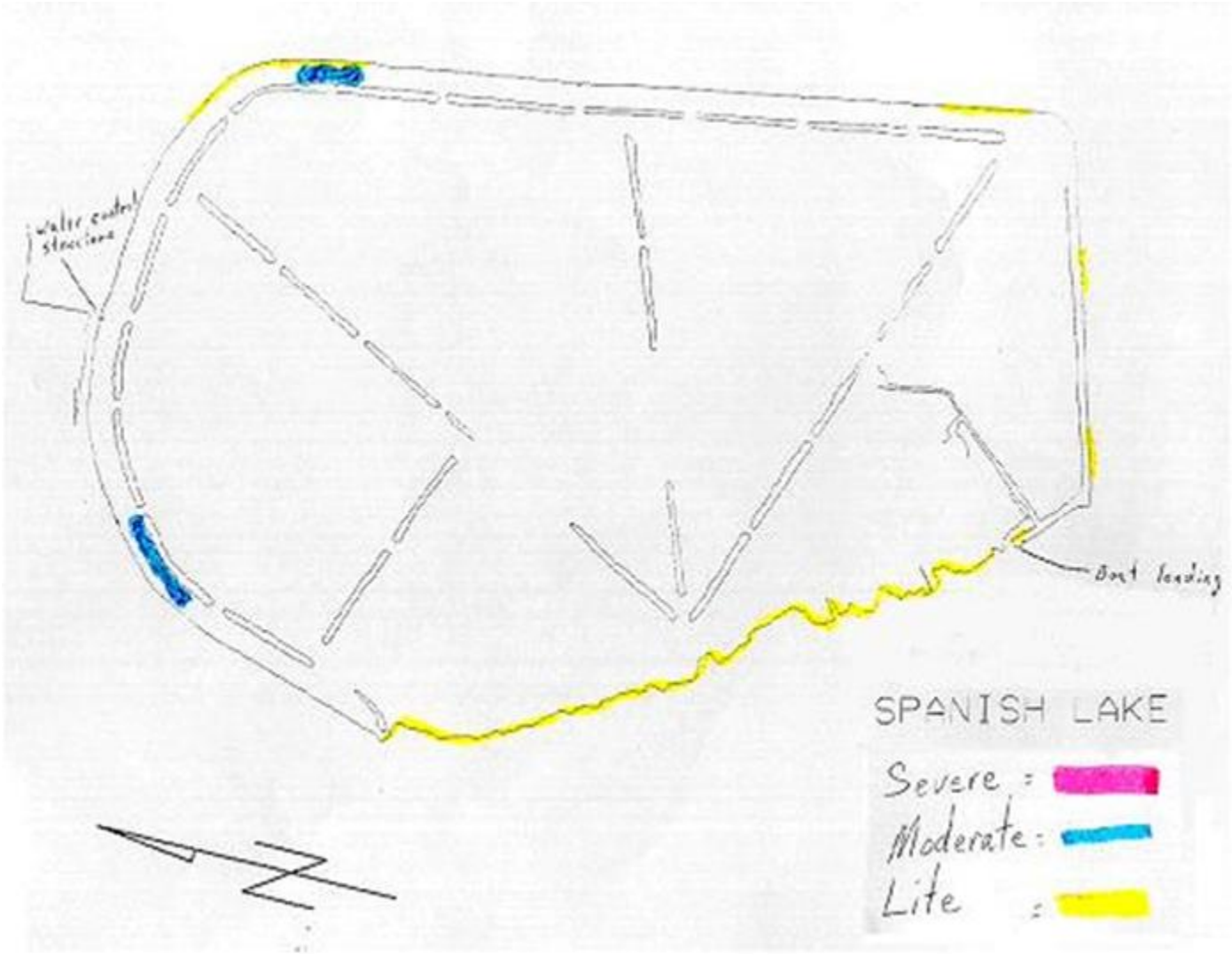


SPANISH LAKE
September 2006
O. Scott Schales

Spanish Lake, Iberia and St. Martin Parishes, was surveyed for the presence of aquatic vegetation on September 19, 2006. The lake had a moderate phytoplankton bloom with secchi disk measurements of 18 cm. Water levels in the lake were approximately 14" below pool stage.

Overall the lake was free of submerged aquatic vegetation. Moderate amounts of American lotus (*Nelumbo lutea*) were observed in two locations along the breakwater levees. Light amounts of water hyacinth (*Eichhornia crassipes*) were observed in the boat landing access channel.

Emersed plant species that were observed along the shoreline were alligatorweed (*Alternanthera philoxeroides*), maidencane (*Panicum hemitomon*), water primrose (*Ludwigia peploides*), duck potato (*Sagittaria latifolia*), Roseau (*Phragmites australis*), and cattail (*Typha* latifolia).



A vegetative type map of Spanish Lake was conducted in June of 2011. Small amounts of vegetation exist in the lake as shown in the type map description. The spray crews did not have to apply herbicide on the lake in 2011.

Spanish Lake Vegetation Survey 6-24-2011 - Martin Plonsky

A survey of aquatic vegetation found in Spanish Lake resulted in the conclusion that there is little to no aquatic vegetation in the lake. Very thin amounts of water hyacinth were observed in the vicinity of the boat launch and on the shoreline of the breakwater islands on the eastern side of the lake. The lake water was saturated ("bloom" condition) with planktonic algae and water ph was above 8.0. Small bunches of iris were seen growing along the eastern bank of the lake. Average water depth was 2 feet. The vegetation survey was conducted on the same day we investigated the report of a fish kill at the lake. No dead fish were observed.

Date	Temp	SpCond	Salinity	Depth	pH	Turbidity+	% odo	DO	Chlorophyl
6/24/11	28.18	0.155	0.07	-0.121	9.09	69.5	129.70	10.12	55.8
6/24/11	27.81	0.155	0.07	0.327	8.75	79.8	109.70	8.61	56.0